

**REMARKS**

The Office Action mailed September 22, 2004, has been received and reviewed. Claims 1 through 26 are currently pending in the application. Claim 1 stands rejected. Claims 2 through 13 have been objected to as being dependent upon rejected base claims, but the indication of allowable subject matter in such claims is noted with appreciation. Claims 14 through 26 are allowed, and Applicant acknowledges such allowance with appreciation. Applicant respectfully request reconsideration of the application in light of the remarks which follow herein.

**Prior Supplemental Information Disclosure Statement**

Please note that a Supplemental Information Disclosure Statement was filed herein on April 26, 2004, and that no copy of the PTO-1449 was returned with the outstanding Office Action. Applicant respectfully requests that the information cited on the PTO-1449 be made of record herein. It is respectfully requested that an initialed copy of the PTO-1449 evidencing consideration of the cited references be returned to the undersigned attorney. A copy of the Supplemental Information Disclosure Statement, PTO-1449, copies of listed documents and a copy of the date-stamped postcard evidencing receipt of these papers by the Office are enclosed herewith.

**Supplemental Information Disclosure Statement filed herewith**

Applicant notes the filing herewith of another Supplemental Information Disclosure Statement with PTO/SB/08B and copies of listed non-U.S. Patent documents, and respectfully requests that the cited documents be made of record herein.

**Erroneous Citation of references on PTO-1449 Form from an Unrelated Application**

Additionally, a PTO-1449 form was received which indicates the inventor as Norio SAKAI and the Attorney Docket Number as 36856.1115. Applicant respectfully submits that this PTO-1449 form does not belong to the present application or any related application and requests that it be removed from the file and the documents cited thereon be removed from the record of the present application. A copy of the incorrectly cited PTO-1449 form marked

“COPY” in red is enclosed for the Examiner’s convenience in identifying same in the Office file for the present application.

### Preliminary Amendment

Applicant’s undersigned attorney notes the filing herein of a Preliminary Amendment on April 2, 2004, which filing was not acknowledged in the outstanding Office Action. Should the Preliminary Amendment have failed for some reason to have been entered in the Office file, Applicant’s undersigned attorney will be happy to have a true copy thereof hand-delivered to the Examiner.

### 35 U.S.C. § 102(b) Anticipation Rejections

#### Anticipation Rejection Based on U.S. Patent No. 6,492,737 to Imasu et al.

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Imasu et al. (U.S. Patent No. 6,492,737). Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

With respect to claim 1, it is respectfully asserted that Imasu et al. does not describe at least one element of claim 1. Specifically, and contrary to the Examiner’s observation in rejecting the claim, the reference fails to describe “at least one opening extending through the interposer substrate, the at least one opening being in communication with the gaps.”

Applicant notes that the reference appears to describe a substrate having a first surface, a second surface and a dielectric member (9) having a plurality of recesses (9b) extending thereinto from the first surface. Applicant further notes that each of the recesses (9b) appears to be sized to substantially receive a conductive bump (13) of at least one semiconductor die (12) therein and exposing at least a portion of a conductive element (6a) at a bottom thereof, the plurality of

recesses (9b) sized so that a gap will be left surrounding at least a portion of a conductive bump (13) in at least some of the plurality of recesses (9b). However, a detailed review of Imasu et al. fails to reveal the claimed “at least one opening extending through the interposer substrate, the at least one opening being in communication with the gaps.” The only “openings” extending through the substrate of the reference are the recesses (9b). There are no other openings depicted or described in the reference, and the recesses cannot also be openings. Furthermore, claim 1 requires that the “at least one opening” be in communication with the gaps (surrounding at least a portion of a conductive bump). Since the sizing of the recesses (9b), in combination with the relative sizing of the conductive bumps (13) actually defines the gaps, recesses (9b) cannot also be in communication with the gaps. In other words, the “at least one opening” must be another, different element from recesses (9b) in order to communicate with a gap defined between a conductive bump (13) and a wall of a recess (9b). Since the reference fails to describe such an opening, it is respectfully submitted that the rejection is in error and should be withdrawn.

Allowance of claim 1 and claims 2 though 13 depending therefrom is respectfully solicited.

#### **Objections to Claims 2 through 13/Allowable Subject Matter**

Claims 2 through 13 stand objected to as being dependent upon rejected base claims, but are indicated to contain allowable subject matter and would be allowable if placed in appropriate independent form. Applicant acknowledges this indication with sincere appreciation, but respectfully asserts that claims 2 through 13 are in condition for allowance in their present form as depending from claim 1.

**CONCLUSION**

Claims 1 through 26 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,

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